# REVIEW

## BOOKS ON BUSINESS CYCLES: MITCHELL, AFTALION, BILGRAM

IN 1912 Professor Taussig could state with justice that, "notwithstanding the abundant literature on crises, there is no good book on the underlying questions of principle." [1] During the past year three books dealing with such questions have appeared: Mitchell's *Business Cycles,* Aftalion's *Les crises périodiques de surproduction,* and Bilgram and Levy's *The Cause of Business Depressions.*[2] All three develop theories of business cycles. The first two are based upon extensive studies of the statistics of the phenomena of cycles and upon the literature of the subject; the last is a deductive study in which statistics and present day writers are alike ignored.

Of the works named, indeed of all studies on crises, Mitchell's *Business Cycles* takes the leading position. It is comprehensive; it contains the most complete and careful statistical study of the phenomena connected with business cycles; it is well-written; pregnant, forceful expressions abound; it is a scientific study by an author who, obviously, is not seeking to establish a pet theory. *Business Cycles* is not notable for the striking originality of the facts estab-

[1] Principles of Economics, vol. i, p. 446.

[2] Business Cycles, By Wesley Clair Mitchell. (Berkeley: University of California Press, 1913. Pp. xviii, 610. Charts 1–77. $5.)

Les crises périodiques de surproduction. Tome I: Les variations périodiques des prix et des revenus; Les théories dominantes. Tome II: Les movements périodiques, de la production; Essai d'une théorie. By Albert Aftalion. (Paris: Rivère et Cie, 1913. Vol. i, pp. xii, 324. Vol. ii, pp. 418, 16 fr.)

The Cause of Business Depressions. By Hugo Bilgram in collaboration with Louis Edward Levy. (Philadelphia and London: J. B. Lippincott Co., 1914. Pp. xvii, 531. Diagrams 1–26. $2.50.)

lished or the theory of crises set forth, but for the marshalling of the data, and the clear expositions and the combination of the ideas of various writers into a self-consistent theory of business cycles. It is evident that the author has been strongly influenced by Veblen. But he has utilized the ideas or suggestions of many authors. As he points out (p. 580) he utilizes Spiethoff's theory of the ill-balanced production of industrial equipment and complementary goods, Hull's theory that the high cost of construction work in periods of intense prosperity causes a severe decline in investment demand and hence a crisis, Lescure's theory of variations in prospective profits combined with Veblen's theory of the discrepancy between prospective profits and current capitalization, Sombart's theory that crises occur because the supply of organic goods does not keep pace with the supply of minerals and the like, Carver's theory of the dissimilar price fluctuations of producers' and consumers' goods, Fisher's theory of the lagging adjustment of interest rates to the fluctuations of the price level and Johannsen's theory of "impaired savings."

Mitchell correctly describes the study which he has made as follows: "This analysis rests primarily upon an elaborate statistical enquiry into the phenomena of recent cycles in the United States, England, France, and Germany. The statistical line of attack was chosen because the problem is essentially quantitive in character, involving as it does the relative importance of diverse forces which are themselves the net resultants of innumerable business decisions. The selection of statistical data, the methods of presentation, and the coördination of the results were determined in large part by ideas borrowed from theoretical writers or from financial journals. But all the tables of figures and all the borrowed ideas were fitted into a framework provided by a study of the economic organization of today, which showed that the industrial process of making and the commercial process of distributing goods are thoroly subordinate to the business process of making money" (p. 570). The theory of business cycles thus developed may appropriately be called "the

profit theory of business cycles." The detailed data upon which the author's conclusions are based are for the period 1890–1911. This is a virtue rather than a defect of the study for two reasons: reliable statistics are not available for earlier years and the recent period is one of commercial homogeneity.

Mitchell's account, in barest outline, of the business cycle is as follows:

Starting with a revival of activity he finds that depression has left this legacy: "a level of prices low in comparison with the prices of prosperity, drastic reduction in the costs of doing business, narrow margins of profit, liberal bank reserves, a conservative policy in capitalizing business enterprises and in granting credits, moderate stocks of goods, and cautious buying."

"For reasons which will appear in the sequel, such conditions are accompanied by an expansion in the physical volume of trade. Tho slow at first, this expansion is cumulative. . . . All this while, the revival of activity is instilling a feeling of optimism among business men, and this feeling both justifies itself and heightens the forces which engendered it by making every one readier to buy with freedom" (p. 571).

An irregular rise of prices begins. "Retail prices lag behind wholesale, the prices of staple consumers' goods behind the prices of staple producers' goods, and the prices of finished products behind the prices of their raw materials. Among raw materials, the prices of mineral products reflect the changed business conditions more regularly than do the prices of raw animal, farm, or forest products. Wages rise often more promptly, but always in less degree than wholesale prices; discount rates rise sometimes more rapidly; interest rates on long loans always move sluggishly in the early stages of revival, while the prices of stocks — particularly of common stocks — both precede and exceed commodity prices on the rise" (p. 572). The causes of the differences are to be found in differences in organization of markets, technical conditions of the market, and in the adjustment of selling to buying prices. These price fluctuations usually result in larger profits.

The revival of prosperity grows into intense prosperity. The decrease in supplementary costs ends as the plants reach full capacity; prime costs rise rapidly; antiquated plants and equipment are utilized; the efficiency of labor declines "because overtime brings weariness, because of the employment of undesirables, and because crews cannot be driven at top speed when jobs are more numerous than men to fill them"; finally, factory organization becomes less efficient (p. 573).

Meanwhile there is stress in the money market and "scarcity of capital." This causes the relinquishment of projected ventures. Contracts for the future delivery of industrial equipment become less numerous. Prices do not rise evenly or indefinitely. Certain prices are fixed by law, others by custom, still others are primarily dependent upon harvests, inventions and improvements, the rates of interest and wages. A minority of business men face a decline in profits; their credits are based upon "the capitalized value of present and prospective profits"; profits waver, loans are made more expensive or renewal refused, and liquidation begins (p. 575).

Wide-spread and forced financial readjustment, with its consequences, ends prosperity and inaugurates an economic crisis. If the banking organization and practice are defective the crisis may degenerate into a panic.

"There follows a period during which depression spreads over the whole field of business and grows more severe. Consumers' demand declines in consequence of wholesale discharges of wage-earners, the gradual exhaustion of past savings, and the reduction of other classes of family incomes. With consumers' demand falls the business demand for raw materials, current supplies, and equipment used in making consumers' goods. Construction work is discontinued, few new enterprises are undertaken, the volume of trade contracts and an irregular fall of prices occurs. . . . Wholesale prices fall faster than retail, the prices of producers' goods faster than those of consumers' goods, and the prices of raw material faster than those of manufactured products. The prices of

raw mineral products follow a more regular course than those of raw forest, farm or animal products. As compared with general index numbers of commodity prices at wholesale, index number of wages and interest on long time loans decline in less degree, while index numbers of discount rates and of stocks decline in greater degree. The only important group of prices to rise in the face of depression is that of high grade bonds" (p. 578).

Profits decrease. "The prime costs of doing business are reduced by the rapid fall in the prices of raw materials and of bank loans, by the marked increase in the efficiency of labor which comes when employment is scarce and men are anxious to hold their jobs, and by closer economy on the part of managers. Supplementary costs also are reduced by reorganizing enterprises which have actually become or which threaten to become insolvent, by the sale of other enterprises at low figures, by reduction of rentals and refunding of loans, by charging off bad debts and writing down depreciated properties, and by admitting that a recapitalization of business enterprises — corresponding to the lower prices of stocks — has been effected on the basis of lower profits" (p. 578).

After two or three years of depression the demand for goods begins to expand, a larger population must be fed and clothed, new tastes appear, the demand for industrial equipment revives, and timidity on the part of investors diminishes. The depression gives way to a revival of prosperity and the business cycle is complete.

Mitchell's account of business cycles is not only plausible but convincing. So are other accounts, in varying degrees. But Mitchell recognizes the important influence of numerous elements; he has fitted those elements into a single framework; and he has tested his theories by painstaking statistical investigations which, in the main, have undoubtedly led him to correct conclusions.

Tho not many of the author's conclusions are open to question, some there are. For instance, he says, "The marriage

rate . . . does vary with the condition of business. . . . But since these variations in the marriage rate are not followed by corresponding variations in the birth rate, they possess little significance for the growth of population" (p. 225). G. Udny Yule's elaborate study led him to the conclusion that the birth rate not only oscillates with the marriage rate of two years previous but that there is a direct dependence of the birth rate upon economic factors.[1] It is not clear that the mere psychological effect of numerous opportunities for employment during prosperity appreciably decreases productivity. These are, however, minor points. Major points in Mitchell's theory are size and tendency of profits during the cycle and the sequence of the price movements among the various classes of goods, — consumers', producers', raw, or manufactured.

As to profits, the crux of Mitchell's theory of crisis, he says, "statistics both trustworthy and significant concerning profits are scarce" (p. 422). The data available, *i. e.*, the earnings of American railways and national banks, and German corporations, appear to substantiate the author's conclusions. However, it is not demonstrated that profits are decreasing when prices reach their maxima. More exact and extensive evidence is needed on this point. Aftalion maintains:[2] first, that profits alternately increase and decrease during recurrent prosperity and depression with considerable regularity; second, that the maxima and minima appear at approximately the same dates as those of prices, but in certain cases "the maxima are reached most often after the maxima of prices [and] the minima, on the contrary, occur frequently before the minima of prices," and third, that profits fluctuate much more violently than do prices. Mitchell (p. 446) and Aftalion[3] agree that there is no apparent uniform relation between failures and crises in the leading commercial nations.

Concerning the price movements of various classes of

[1] "The changes in the marriage and birth rates in England and Wales during the past half century: with an inquiry as to their probable causes." G. U. Yule, in Jour. Roy. Stat. Soc., March, 1906.

[2] Op. cit., vol. i, pp. 184–185.

[3] Idem., p. 202.

agree with Mitchell that "until the under-consumption theories have been shored up by more convincing evidence than has yet been adduced in their favor, the view must prevail that the difficulty of warding off encroachments upon profits by advancing costs comes to a head earlier in other lines of business than in those concerned with consumers' goods" (p. 502). Aftalion, as will appear in detail later,[1] also opposes under-consumption theories,[2] but by reasoning based upon marginal utility and the roundabout process of capitalistic production. He holds that low prices are maintained in a depression by over-production of consumption goods, this over-production being reflected back along the line of capitalistic production. The strong point of Mitchell's theory is that it is in accord with the sequence of the change in prices, — production goods falling and rising before consumption goods; whereas Aftalion's theory, it would appear, calls for the opposite sequence of prices to that so clearly shown by Mitchell. The latter's theory is dependent upon profits; disturbance in industry and prices follow the fluctuations of profits. However, it is admitted that the data concerning the action of profits are meager. Aftalion's theory is dependent upon production; over-production or under-production being revealed first in the prices of consumption goods, but he ignores the evidence that consumption goods are last, rather than first, to change in price. In his summary of "the details of the movements of prices for various categories of merchandise" [3] he describes the relative intensity and regularity of variations and does not refer to the time element.

We come, then, to the detailed consideration of the theory and facts presented in Aftalion's *Les Crises périodiques de surproduction*. The author's theory of business cycles can best be given by translating part of his own résumé:

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I have explained the rhythm of prices principally by that of production and the rhythm of production by that of price. In each of these two explanations I have made use of the same two leading ideas. On the one hand, as it is natural in a matter where the price variations hold such an important place, an application of the ordinary laws of value and price was evident in the phenomena observed. On the other hand, much light has been thrown upon the subject by the consideration of certain characteristics of the capitalistic technique of production: the long time required for the construction of fixed capital and the necessary maintenance in activity of a very costly equipment.

What, infact, is the explanation of the rhythm of price? We have had recourse to the laws which determine that which is called the market price of merchandise. At any moment this price depends upon supply and demand or, more exactly, the curves of supply and demand. As demand, by itself, does not appear to have any reason for alternately increasing and decreasing, and as production, on the contrary, does present fluctuations of that nature, it is the rhythmetic variations of supply that I have held responsible for the cyclical oscillations of prices.

Crises have been supposed to result more particularly from over-production, from a plethora of merchandise. The possibility of *general over-production* has been insisted upon. The sense has been defined. The *generality* of over-production does not indicate its universality. It has also been shown that production need not be excessive with reference to the totality of our needs; but it may be too considerable for the satisfaction of the needs of the same intensity as those previously satisfied, too considerable, consequently, not to lower the marginal utility and the prices of goods. Still that lowering of prices does not indicate in itself an over-production, because the cost may not also lower retroactively in like proportions. Permanent over-production is rationally impossible.

But the cyclical movements of production do not account for those of price except under the conditions created by the technique of capitalistic production. We have seen also that during prosperity, because of the time necessary for the construction of equipment, production as a whole may increase without a weakening of prices. The increase is mainly in the manufacture of industrial equipment. Until the goods be finished and enter into service, the need for fixed capital and, consequently, the need for consumption goods or direct services remains unsatisfied. The under-production of these last named goods or services persists in spite of the great productive effort which only prepares a future abundance. The increase of the prices of these goods supports the scaffolding of high prices. When the former prices are depressed the construction of

fixed capital greatly slackens. But the efficient equipment bequeathed by the preceding period which must be kept employed because of its high cost, the large quantities of fixed capital placed in process of manufacture during prosperity and finished only in the first years of the depression make the over-production of consumption goods lasting. Therefore the general slump in prices is maintained.

The rebound of these phenomena is evident in a multitude of manifestations of economic and social life. The law regulating the prices of the services of the agents of production is also of moment. The rhythm of prices is followed by a rhythm of wages, interest, and profits. In its turn the rhythm of income or well-being influences the movements of population, marriages, births, pauperism, criminality, the payment of taxes, and a host of other things. . . .

What is the explanation of the rhythm of production?

We must still appeal to the laws of value and price. But it is a question now not only of *market* price but of *normal* price. In spite of the diversity of scientific conceptions concerning value it is agreed that there is a tendency of market price to gravitate toward normal price due to the action of market price on production. Increase of price above the normal price stimulates production which ends by depressing the price. The decrease of the market price favors a cessation of production which ends by beginning anew the same sequence.

But here the law of value is not sufficient to account for the considerable rhythm of production, the regular alternation of several years of over-production and under-production, or of over and under-capitalization, without bringing capitalistic production into the explanation. Without doubt the direct factor in the successive excesses in opposite directions consists in the faulty foresight of enterprisers and others. But it is the capitalistic technique which renders this faulty foresight inevitable.

During prosperity the increase of price makes the development of production possible. But this development does not take place until the previous construction of the necessary equipment. As this construction takes a long time, there is an insufficient satisfaction of wants, and a persistence of high prices during all this time, induced by new orders, new manufactures of industrial equipment, and above all by its manufacture in excessive quantities, and by *over-capitalization*. This over-capitalization finally ends by becoming apparent in proportion as the fraction completed bears to the new equipment. Over-production is then revealed. Prices drop. The crisis breaks.

During the depression which follows, the drop in prices brings about a slackening of production. But because of capitalistic pro-

duction that which decreases immediately is only the manufacture of new fixed capital. The excess of the finished equipment, increased by new deliveries, the over-abundance of consumption goods, due to a costly equipment that must be operated, prolongs the downward trend of prices. Just so long as this slump in prices continues there is no inducement to extend the existing equipment. *Under-capitalization*, then, takes place, which prepares for the return of under-production and prosperity. . . .

It is the modern time-using capitalistic production, the permanence of fixed capital, and the inability of men to correctly estimate the future that cause crises. If we should produce directly and immediately the consumption-goods required, cycles and periodic crises would be unknown. In such case a lack of merchandise would be a " long time " lack, another question.

The chief objection to Aftalion's theory has already been stated — inconsistency with the established sequence of price changes of producers' and consumers' goods. Possibly this inconsistency can be explained; but if so, the explanation has not been given. That the roundabout process of production is of primary importance, and that price influences production, and production, in its turn, influences price, as Aftalion explains, both being factors in business cycles, — all this few will deny. But it remains true that Aftalion's solution is speculative and, at one point at least, does not agree with known facts.

Valuable data and acute analyses are to be found in *Les crises périodiques de surproduction*. The author begins his work with a study of prices. He finds marked periodicity; that the prices of foodstuffs participate slightly in this periodicity; that the contention that minerals fall first in price is not confirmed; that various industries have distinctive price movements. He discusses the effects of price movement on wages, interest and profits, the more important conclusions being as follows: wages move with prices but lag behind the latter; there is a long time upward trend of wages; physical productivity, at least in coal and iron mines and steel manufacture, increases during depression; high prices during prosperity, however, more than compensate employers for the decrease in physical productivity; oscilla-

tions in wages appear to be in the same direction as the oscillations in productivity measured in value; on an average real wages increase 20 % in prosperity and decrease 7 % in depression; fluctuations of the rate of interest are similar but not as violent as those of prices; prices, then profits, and finally interest rates, increase during prosperity; increasing prices tend to make people value present goods higher in terms of future goods; in prosperity, with a larger number of workers, the marginal physical productivity of capital increases; profits move with prices but fluctuate more violently; during depression there is a decrease of real cost and with the return of prosperity a slackening, at least, of its diminution; industrial concentration increases during depression by the elimination of marginal establishments; competition and the "law of least effort" show their effects most strongly during depression and the law of diminishing returns during prosperity; production increases during prosperity but it is not certain that it actually decreases during depression, both capital and production having a long time upward trend.

The second volume of Aftalion's work is an extensive account of the periodic movement of production, the primary cause of business cycles, and of the influences of the secondary causes, such as variations in demand because of variations in wages, interest rate, and profit, and the effects of speculation and saving. Because of the rôle that profits play in Mitchell's theory it is interesting to note what Aftalion has to say concerning them:

"Besides the desire to benefit from the high price of goods manufactured by fixed capital, savings, the gross profits from industrial enterprises constitute, then, leading causes of the increase of demand and prices of capital goods during prosperity and of the decrease during depression. We have here, therefore, factors which generalize and accentuate the alternating price movements. But it is necessary to repeat that they are secondary factors. The movements of income and savings which act thus upon prices are merely the consequences of price movements which, in

turn, are due to variations in the supply of merchandise" (vol. II, p. 245).

Aftalion holds that the rate of discount and bank reserves move in a contrary direction during business cycles to that required by the quantity theory of money. He accepts Irving Fisher's equation of exchange but not his account of the action and interaction of the elements therein appearing. It would seem, however, that he misconceives Fisher's meaning. He calls prosperity "a period of over-work during which consumption increases less rapidly than the tasks before us" (vol. II, p. 376).

Mitchell and Aftalion hold that money and banking systems do not cause crises, but that imperfect systems may convert a business crisis into a financial panic. Messrs. Bilgram and Levy, the authors of *The Cause of Business Depressions*, hold that the legal limitation placed upon banks, especially the reserve requirements, the restrictions upon the issue of bank notes, and the obligation to redeem such notes in primary money upon demand, constitute the cause of crises, panics and depressions.

Mr. Bilgram's "strictly deductive line of investigation," as he calls it, leads him to the conclusions that economists are teaching "the misconceptions of economic history which have come down to us from the past" (p. 457), that "the recurring economic paroxysms, known as financial crises, which are followed by periods of industrial depression, are the inevitable outcome of the arbitrary limitation of the volume of currency," and that "this same cause gives rise to the most grievous of the many forms of social and economic injustice that are so loudly crying for redress throughout the modern world" (p. 511).

The argument runs thus: "The volume theory of the value of money" is inconsistent with facts and untenable. "Money does not owe its value to the demand for a medium of exchange, nor to any law authorizing the issue of such medium, but exclusively to the value of that of which the money consists, be it the standard commodity gold, or credit expressed

in terms of that commodity" (p. 155). "The time-honored notion that money is paid to the lender of money for the use of 'capital' is groundless" (p. 280). "Investigation discloses the fact that what the borrower is after is *money* and that the interest which he pays to the lender of money is paid for the use of money and not for the use of capital" (p. 277). "It follows that if the total demand for money is not supplied, competition will tend to put a premium on its use. Interest is accordingly paid on money because of its inadequacy to meet the demand of those who need it for the exchange of their products or services, and, as we shall see later, this competition raises the rate of interest as high as the market will bear, indeed, so high as to exert a destructive effect upon the market" (p. 317). In a business depression "*the general over-supply of things and services offered for exchange can be accounted for only by an equal under-supply of the medium of exchange. . . . The arbitrary control of the volume of currency, accordingly, is not only the cause of the predatory power of wealth, but also the cause of industrial stagnation*" (p. 363). The remedy, therefore, is for the government to advance notes to banks freely on the security of their assets, including loans on real estate security, and national, state and municipal bonds; such notes to be redeemable in gold by the government, but not by the banks; "the gold for this latter fund could be obtained by requiring every bank applying for currency to furnish not only the prescribed amount of securities, but also gold to the amount of such percentage of the currency issued as experience indicated as sufficient" (p. 409). The Federal Reserve Act "is a step in the right direction" but the process of issuing the currency is so costly (because of the reserves required, the interest rate that banks rediscounting will be obliged to pay, and the machinery for getting the notes into circulation) that "the intention of the law, that of rendering the business world independent of financial disturbances, can at best be but partially realized" (p. 518).

For a thoro criticism of *The Cause of Business Depressions* one would need to cover the entire field of economics,

an uncalled for proceeding. It is uncalled for, because Mr. Bilgram does not adequately support his economic heresies with statistical and other data; because the crises in England, France, Germany and Canada are not analyzed with reference to their currency systems; and because he does not recognize the contributions made by contemporary economists. For example, he discusses money theory without reference to Irving Fisher or Laughlin, the wage fund theory without reference to Taussig, and marginal productivity without reference to Clark. The authors most frequently quoted by Mr. Bilgram are Adam Smith, Ricardo, Mill, Marx, Henry George, Simon Newcomb and Böhm-Bawerk. In the main, he disagrees with their systems, except that he endorses the Ricardian theory of rent and labor theory of value, and the marginal utility concept. He holds that " rent . . . equals the advantages which the land employed affords over marginal land, and therefore depends on relative fertility and advantages of location " (p. 239); that " pure interest " is clearly traceable to a *monopoly upheld by law* " (p. 350), that is, to " arbitrary restrictions on the natural expansion of the means of exchange " (p. 512); that labor must take " what is left after rent and interest is paid " (p. 360), and that " the apparent power of capital to grow is really a power to acquire an unearned share of the results of labor performed by those who work " (p. 458).

In conclusion, the reviewer commends especially Mitchell's *Business Cycles* because of its excellent statistical discussions, numerous diagrams and clear presentation. This work offers good suggestions for bettering barometers for the forecasting of business conditions. As Mitchell says, " experience supports the current belief that occasional crises are inevitable " (p. 550) . . . but, nevertheless, " what has been already accomplished in these directions toward controlling our business machinery may well be the earnest of greater achievments in the future " (p. 586). The Federal Reserve Act is designed to prevent the recurrence of financial panics in this country. The proposals to use governmental activities " as

a balance wheel to steady the business mechanism" nov being tried on French railways [1] and advocated by the Webb in England,[2] aim to diminish the severity of depressions These proposals demand thoro consideration by economist and governmental officials everywhere.

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[1] See Rapports sur les indices des crises économiques et sur les mesures financière propres à atténuer les chômages résultant de ces crises, a government publication issue in 1911 by the French Minister of Labor.

[2] The Prevention of Destitution. (London, 1912.) Cf. Mitchell's Busines Cycles, p. 587.